

Cumberland Plateau. In both cases their route of migration was by way of the terminus of the Appalachian Valley and the southwestern edge of the Cumberland Plateau, never penetrating far into it, but arriving finally in the Highland Rim.

6. The Cumberland Plateau has been the major contributor to the fauna of the western half of the Coastal Plain.

7. The Piedmont Highlands have been the major contributor to the fauna of the eastern and central portions of the Coastal Plain. One Piedmont species (*Polygyra maxillata*) has spread great distances into the western part of the Coastal Plain, apparently by following the river valleys.

8. The Floridian area has contributed several species to the upper edge of the central Coastal Plain area. This contribution is small, and probably followed both the swamp forests and the prairies.

9. Species of Mexican affinities (*Helicina orbiculata*, *Bulimulus dealbatus*) have come in both by way of the prairies and by the red cedar thickets, possibly migrating along the north end of the Mississippi embayment of the Tertiary from the Ozark Plateaus.

**NOTES ON *STEPHANODA PATAGONICA* (SUTER)
AND THE GENUS *RADIODISCUS*, WITH A NEW
NAME FOR *R. PATAGONICUS* PILSBRY**

BY G. I. CRAWFORD

Assistant Keeper at the British Museum (Natural History)

Three of the original specimens of *Stephanoda patagonica* (Suter, 1900, p. 334, as *Pyramidula*) from a modern deposit at Santa Cruz, Patagonia, are in the collections of the Philadelphia Academy and one is in the British Museum (1900.7.5.9). Pilsbry (1900, p. 387) followed Suter in saying that the apical $1\frac{1}{2}$ whorls of the Philadelphia specimens were smooth, but added (1911) that this was the result of their worn condition, and identified with them some specimens from the Rio Chico, the nepionic whorls of which had spiral sculpture, but no transverse riblets.

On examination I found that the specimen of Suter's species in the British Museum had well marked transverse ribs on the nepionic whorls. At my request Dr. Pilsbry kindly reexamined his

specimens, and wrote to point out to me that they had not only transverse ribs but also a very fine spiral sculpture, visible only with a high magnification and overlooked at my first examination. The apical $1\frac{1}{2}$ whorls of the British Museum specimen are sculptured with low, blunt radial riblets, which do not differ markedly from the riblets of the post-embryonic whorls. These radial riblets are crossed by about 20 very fine raised spiral lines, which also continue faintly on the post-embryonic whorls.

Radiodiscus is defined by Pilsbry in Pilsbry and Ferriss (1906, p. 154) as having no transverse riblets on the nepionic whorls, and Pilsbry (1911) restricts the genus *Stephanoda* to include only species with no spiral sculpture on these whorls. In *S. patagonica* the spiral sculpture is much less well-marked than the transverse, and I therefore consider it to be a *Stephanoda* as far as our present knowledge goes. It is likely that several species supposed to have no spiral nepionic sculpture will be found under magnifications of 60 or 100, to be marked with extremely fine inconspicuous spiral ribs or grooves.

The specimens from the Rio Chico, which are true *Radiodiscus* and lack the transverse ribs of the nepionic whorl, must be given a new name, and, with Dr. Pilsbry's approval, I suggest that they be renamed *Radiodiscus riochicoensis* nom. nov., the type being the specimen figured by Pilsbry (1911, p. 517, pl. 42, f. 1, 1a, 1b). This is No. 88807 in the collections of the Academy of Natural Sciences, Philadelphia.

In the hopes that it will assist the study of these difficult genera I re-describe here the sculpture of type specimens of two Magellanic species, as seen under a monocular magnification of 90.

Radiodiscus magellanicus Smith (1881, p. 36) (B.M. 79.10.15.93), nepionic $1\frac{1}{2}$ whorls engraved with about 20 fine spiral lines crossing broad, low, extremely ill-defined transverse undulations: post-embryonic whorls with high and narrow transverse riblets, with 3 or 4 very fine low secondary riblets between each pair: no post-embryonic spiral sculpture.

R. coppingeri Smith (1881, p. 36) (B.M. 79.10.15.92), nepionic $1\frac{1}{2}$ whorls with 14 or 15 well marked spiral riblets, crossing undulations similar to those of *R. magellanica*: post-embryonic whorls with high, fairly broad riblets, and no secondary riblets;

the spiral sculpture persists as distinctly raised lines, finer than on the embryonic whorls.

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**ATYS SEMISTRIATA PEASE IN KANEOHOE BAY,
OAHU, HAWAIIAN ISLANDS**

WILLIAM MARCUS INGRAM

Zoology Laboratory, Cornell University

As well as the writer has been able to determine there is no account in the literature of the body parts of *Atys semistriata* Pease, nor of the conditions under which this species lives. Dr. Henry A. Pilsbry states, "Very little is known of the ecology of Hawaiian Tectibranchs. Collectors of living specimens should note their stations and such conditions as can be observed."¹ At this time the writer has additions to make to the literature concerning the external body parts, and the ecology of this species of Hawaiian Tectibranch.

During the years 1935-1937 the writer worked in conjunction with Dr. Charles Howard Edmondson of the University of Hawaii and the Bernice P. Bishop Museum, Honolulu, in making a survey of the fouling organisms in Kaneohe Bay, Oahu.² During these years eight individuals of *Atys semistriata* Pease were collected approximately 400 yards from the shore of the Territorial Fish and Game Farm in Kaneohe Bay at a depth of half a fathom. Data concerning these individuals together with other

¹ Pilsbry, H. A., *Marine Mollusks of Hawaii*—XIV, XV, *Proc. Acad. Nat. Sci.*, p. 360, 1920.

² Edmondson, C. H., and W. M. Ingram, *Fouling Organisms in Hawaii*, *Oceas. Papers*, Bernice P. Bishop Museum, pp. 251-300, Vol. XIV, No. 14, Jan., 1939.